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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,232	01/31/2002	Massimiliano Antonio Poletto	12221-010001	2754
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FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER PERUNGAVOOR, VENKATANARAY	
			ART UNIT 2132	PAPER NUMBER
DATE MAILED: 11/07/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,232

Applicant(s)

POLETTO ET AL.

Examiner

Venkatanarayanan Perungavoor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 18-21 and 25-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/14/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The Applicant's arguments regarding Claim 7 are not persuasive. As Maloney discloses the monitoring of network packets(see Col 8 Ln 27-40) and producing a graph and correlates between historical graph(see Col 6 Ln 65- Col 7 Ln 19), where he discloses the generation of many graphs and correlating of each of them based on history and patterns.
2. The Applicant's arguments regarding Claim 22 are persuasive and the rejection has been withdrawn.
3. The Applicant's arguments regarding Claim 1 are not persuasive. As Maloney discloses the filtering of network traffic based on characterization process see Col 8 Ln 27-40. And the Gleichauf reference shows it monitoring device positioned between data center and network see Fig. 2 item 14. And further the thwarting of denial of service attacks based on a threshold see Col 8 Ln 58- Col 9 Ln 2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case the combination of network traffic detection of Maloney and the use of threshold value to detect denial of service attacks.

4. The Applicant's arguments regarding Claim 25 are not persuasive. As Maloney discloses the activation of filters(after installation) see Col 8 Ln 27-40.

Response to Amendment

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
6. A person shall be entitled to a patent unless –
7. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
8. Claim 7, 21-22 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,304,262 B1 to Maloney et al.(hereinafter Maloney).
9. Regarding Claim 7, 21, Maloney discloses the building of graph and the classifying of the attack see Col 10 Ln 37-45 & Col 6 Ln 64-Col 7 Ln 6.

10. Regarding Claim 22, Maloney discloses the vector-based correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks and reduce dropping legitimate traffic see Col 6 Ln 63-Col 7 Ln 11.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 1-6, 18-20, 22, 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,301,668 B1 to Gleichauf et al.(hereinafter Gleichauf) in view of U.S. Patent 6,304,262 B1 to Maloney et al.(hereinafter Maloney).

13. Regarding Claim 1, Gleichauf discloses a detection process to determine to if the parameter has exceeded normal values see Col 8 Ln 46- Col 9 Ln 3; the filtering process based on the characteristic and being incorporated in a firewall, router, and ID system see Col 1 Ln 22-31 & Col 4 Ln 33-39. Gleichauf does not disclose a process of building an graph to and to classify the attack. However, Maloney discloses the building of graph and the classifying of the attack see Col

10 Ln 37-45. It would be obvious to one having ordinary skill in the art at the time of the invention to include the building of graph and the classifying of the attack in the invention of Gleichauf in order to allow the systems administrator to take appropriate measures as taught in Maloney see Col 7 Ln 40-Col 8 Ln 12. And further, Gleichauf discloses the possibly of visual representation see Fig. 3 item 64, thus the inclusion of a building a graph would be reasonable successful.

14. Regarding Claim 2, 3, and 4, 22, Gleichauf does not disclose a vector-based correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks and reduce dropping legitimate traffic . However, Maloney discloses the vector-based correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks and reduce dropping legitimate traffic see Col 6 Ln 63-Col 7 Ln 11. It would be obvious to one having ordinary skill in the art at the time of the invention to include a correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks in the invention of Gleichauf in order to a precise relationship and to differentiate between legitimate traffic as taught in Maloney see Col 7 Ln 7-11.

15. Regarding Claim 5, Gleichauf discloses the aggregate filtering see Col 1 Ln 23-31.

16. Regarding Claim 6 and 18, Gleichauf discloses the parameters including a source IP protocol, IP length, TCP/UDP ports see Col 6 Ln 24-35.

17. Regarding Claim 19, Gleichauf discloses the data collector see Fig. 2 item 36.

18. Regarding Claim 20, Gleichauf discloses the process being executed on a gateway see Fig. 2 item 20.

19. Regarding Claim 28-31 and 32, Gleichauf discloses a detection process to determine to if the parameter has exceeded normal values see Col 8 Ln 46- Col 9 Ln 3; the filtering process based on the characteristic and being incorporated in a firewall, router, and ID system see Col 1 Ln 22-31 & Col 4 Ln 33-39. Gleichauf does not disclose a process of building an graph to and to classify the attack. However, Maloney discloses the building of graph and the classifying of the attack see Col 10 Ln 37-45. It would be obvious to one having ordinary skill in the art at the time of the invention to include the building of graph and the classifying of the attack in the invention of Gleichauf in order to allow the systems administrator to take appropriate measures as taught in Maloney see Col 7 Ln 40-Col 8 Ln 12. And further, Gleichauf discloses the possibly of visual representation see Fig. 3 item 64, thus the inclusion of a building a graph would be reasonable successful.

20. Regarding Claim 33, 34, 35, and 36, Gleichauf discloses the communicating statistics to a control center, the gateway being deployed in the network and filtering occurs on nearby routers see Fig.1 item 5, Fig. 2 item 20, Fig. 2 item 16 and 32.

21. Regarding Claim 37-38, Gleichauf discloses a detection process to determine to if the parameter has exceeded normal values see Col 8 Ln 46- Col 9 Ln 3; the filtering process based on the characteristic and being incorporated in a firewall, router, and ID system see Col 1 Ln 22-31 & Col 4 Ln 33-39. Gleichauf does not disclose a process of building an graph to and to classify the attack. However, Maloney discloses the building of graph and the classifying of the attack see Col 10 Ln 37-45. It would be obvious to one having ordinary skill in the art at the time of the invention to include the building of graph and the classifying of the attack in the invention of Gleichauf in order to allow the systems administrator to take appropriate measures as taught in Maloney see Col 7 Ln 40-Col 8 Ln 12. And further, Gleichauf discloses the possibly of visual representation see Fig. 3 item 64, thus the inclusion of a building a graph would be reasonable successful. Gleichauf does not disclose a vector-based correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks and reduce dropping legitimate traffic . However, Maloney discloses the vector-based correlation process that

correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks and reduce dropping legitimate traffic see Col 6 Ln 63-Col 7 Ln 11. It would be obvious to one having ordinary skill in the art at the time of the invention to include a correlation process that correlates suspicious parameters and determines existence of correlations of those parameters that can point to types of attacks in the invention of Gleichauf in order to a precise relationship and to differentiate between legitimate traffic as taught in Maloney see Col 7 Ln 7-11.

22. Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent 6,304,262 B1 to Maloney et al.(hereinafter Maloney) in view of U.S.

Patent 6,301,668 B1 to Gleichauf et al.(hereinafter Gleichauf).

23. Regarding Claim 25, Maloney does not disclose the installing filters on routers, having data collectors, and parameters. However, Gleichauf discloses the installing of filters on routers see Col 4 Ln 33-39. Gleichauf discloses the data collector see Fig. 2 item 36. And further, Gleichauf discloses the parameters including a source IP protocol, IP length, TCP/UDP ports see Col 6 Ln 24-35. It would be obvious to one having ordinary skill in the art at the time of the invention to include installing filters on routers in the invention of Maloney in order to increase security as taught in Gleichauf see Col 4 Ln 33-39.

Allowable Subject Matter

24. Claims 8-17, 22-24, 39-40 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Venkatanarayanan Perungavoor whose telephone number is 571-272-7213. The examiner can normally be reached on 8-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The


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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Venkatanarayanan Perungavoor
Examiner
Art Unit 2132

vp
11/2/2005


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